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THE TEACHER EDUCATION PROGRAM OF THE FAR WEST LABORATORY FOR
EDUCATIONAL RESEARCH AND DEVELOPMENT.

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FAR WEST LAB. FOR EDUCATIONAL RES. AND DEV.

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TECHNIQUES, PROGRAM COSTS, INSTRUCTIONAL IMPROVEMENT,
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INITIAL WORK OF THE FAR WEST LABORATORY FOR EDUCATIONAL
RESEARCH AND DEVELOPMENT WILL BE FOCUSED UPON INSERVICE
TEACHER EDUCATION AND THE DEVELOPMENT OF SELF-CONTAINED
INSERVICE COURSES UTILIZING MICROTEACHING. EACH OF THESE
COURSES, CALLED MINICOURSES, WILL BE DIRECTED TOWARD A
PARTICULAR TEACHING SKILL OR TECHNIQUE--FOR EXAMPLE, THE
BASIC SKILLS INVOLVED IN QUESTIONING. THE ESSENTIAL IDEA OF
MICROTEACHING IS TO VIDEOTAPE A SPECIFIC MINIATURE TEACHING
SITUATION, THUS PERMITTING CLOSE REVIEW AND ANALYSIS OF THE
PLAYBACK. FOR THIS, THE TEACHER TYPICALLY WORKS WITH A SMALL
CLASS (4-10 PUPILS), TEACHES A SHORT LESSON (5-15 MINUTES),
AND FOCUSES ON ONE SMALL, SPECIFIC PART OF TEACHING BEHAVIOR.
THE ADVANTAGES OF MICROTEACHING INCLUDE--(1) EMPHASIS ON THE
ACQUISITION AND PERFORMANCE OF SPECIFIC SKILLS, (2) IMMEDIATE
FEEDBACK, (3) REINFORCEMENT OF AN EMERGING SKILL, AND (4)
CONSTRUCTION OF COMPLEX SKILLS FROM SPECIFIC COMPONENTS
LEARNED SINGLY. THE COST OF IMPLEMENTING MINICOURSES FOR A
SCHOOL DISTRICT WILL BE LOW, WITH THE SIGNIFICANT COSTS BEING
THE ACQUISITION OF A VIDEO TAPE RECORDING SYSTEM AND THE
PROVISION OF SUBSTITUTE TEACHERS WHILE THE REGULAR TEACHERS
ARE IN THE MINICOURSES. THE LABORATORY PLANS TO HAVE ITS
FIRST MINICOURSE AVAILABLE FOR USE IN SCHOOLS BY EARLY 1968.
(A 10-PAGE SUMMARY OF TENTATIVE LESSONS FOR MINICOURSE I,
"EFFECTIVE QUESTIONING IN A CLASSROOM DISCUSSION," IS
INCLUDED.) THIS REPORT WAS PRESENTED AT THE 1967 NCTE ANNUAL
CONVENTION. (MM)

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THE TEACHER EDUCATION PROGRAM

of the

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

Objective

The primary objective of the Teacher Education Program is to bring about desired levels of teaching behavior in areas critical to improved educational practice and pupil learning. Initial work of the Far West Laboratory for Educational Research and Development within this program will be focused directly upon inservice teacher education and, specifically, will develop self-contained teacher inservice training courses utilizing microteaching. Each of these courses, called Minicourses, will be directed toward shaping teacher's behavior with respect to a particular teaching skill or technique.

The Microteaching Approach

We propose to build our inservice training courses around the microteaching approach because this technique provides an instructional sequence in which the traditional inservice weaknesses can be effectively overcome.

Although research evidence on microteaching is far from conclusive at this time, most studies to date have shown that the technique brings about significant changes in the behavior of the interns. We have been working cooperatively with the Stanford Research and Development Center in parts of our program in order to take advantage of the valuable experience they have gained. Our program is designed to adapt the Stanford approach so that it better fits the different situations found in inservice training. The self-contained inservice courses we develop are called "Minicourses".

Our first Minicourse deals with the basic skills involved in questioning. We also plan to develop courses on other basic teaching skills such as reinforcement, classroom management and pupil-teacher interaction. However, we plan to deal not only with basic teaching skills which have been emphasized at Stanford, but with other skills urgently needed by the teacher who is in service. Thus, in addition to basic skills, we will provide training in 3 other areas:

1. Skills needed to teach non-typical pupil groups. (Our first effort here will be directed to improving the language development of Negro elementary pupils.)
2. Skills needed to teach elementary and secondary student in new educational settings. (Our first effort in this area will be directed to skills needed to work effectively in an individualized instructional program.)
3. Skills needed to teach new and different curricula, (In this area, we are planning a Minicourse on the linguistics approach to the teaching of English.)

Microteaching as it is now emerging from research assumes several forms. The essential idea, however, is to create a special teaching encounter, in miniature, and in such a way as to permit a closer observation of its detail. Thus, in microteaching the teacher works with a small class (typically 4 - 10 pupils), teaches a short lesson (5 - 15 minutes) and concentrates her attention on a specific and small part of the complex of teaching behavior (e.g., encouraging pupils through techniques of probing). Also, to make it possible for him (and others) to observe carefully and study in detail just exactly what goes on during the encounter, his performance usually is recorded on videotape which is then available for immediate replay. Thus, the teacher is provided with a means to see himself as others see him, to judge his performance for himself, to analyze and study again and again a particular skill he may be seeking to acquire, and to isolate and concentrate on one part of a complex skill at a time. The advantages offered in microteaching in comparison with many other alternatives in inservice teacher education include the following:

1. Instruction emphasizes the acquisition and performance of specific teaching skills, rather than discussion of generalizations about how to teach;
2. The teacher, while learning, receives immediate feedback with respect to relative degrees of success or mastery;
3. The teacher can reinforce emerging mastery of a skill by using the opportunity to re-teach the same lesson;
4. Complex teaching skills can be assembled from specific components that are learned one at a time. It is not necessary to learn the whole of a complex skill at one time.

Minicourses will be tailored to fit the special circumstances of inservice education. The teacher will be able to acquire a skill, be able to plan his practice in concert with his regular teaching activities, and need not depend upon others for coaching, critique or supervision. The cost of implementing

minicourses to a school district will be low. It is expected that access to a low-cost videotape recording system (\$1500 or less and which may be rented) will meet all of the special equipment requirements of the course. The only other costs of any significance will be that of providing a substitute teacher for a short period of time while the regular teacher is engaged with the course (on the average, one hour per day for three weeks).

The Laboratory plans to have its first minicourse available for use in schools by early 1968. How many courses the Laboratory eventually develops will depend upon a number of factors, some of which are yet to be determined. Among these are:

1. How successful the Laboratory becomes in developing effective courses.
2. What degree of acceptance the concept of minicourses receives in actual use in schools. (Initial indications are that the acceptance level can be expected to be very high.)

Teachers who participated in our preliminary field test were enthusiastic about the course in spite of its many deficiencies. Perhaps more important than this enthusiasm was the tentative evidence gathered in the preliminary field test which indicates that the course did bring about changes in most of the teacher behaviors that it was designed to change. However, the preliminary field test sample was too small to provide us with conclusive evidence. The main field test of the revised course will include 48 teachers selected from 12 elementary schools. The videotapes of pre and post-instruction behavior on this sample plus the other evaluation data to be collected will provide us with a sound basis for evaluating the effectiveness of the course. If we develop additional courses, we plan an extensive program of development and applied research which should provide us with the knowledge we need to make our Minicourses increasingly effective. At this point it seems very probable that our program will make a significant contribution to improving teacher skills through inservice education.

Far West Laboratory for Educational Research and Development

TEACHER EDUCATION PROGRAM

For Minicourse 1 - Effective Questioning in a Classroom Discussion

CONTENTS AND TENTATIVE SEQUENCE

- I. Objective: To change teacher behaviors that will increase the pupil's readiness to respond to discussion questions.

Specific behaviors to be covered:

- A. Ask question, pause 5 seconds, then call on pupil.
- B. Deal with incorrect answers in an accepting, nonpunitive manner.
- C. Call on both volunteers and non-volunteers in order to keep all pupils alert and distribute participation.

- II. Objective: To change teacher behavior so as to decrease teacher participation and raise the level of pupil responses.

Specific behaviors to be covered:

- A. Redirection - directing the same question to several pupils.
- B. Framing questions that call for longer pupil responses.
 - 1. Ask for sets or groups of information when framing information level questions.
 - 2. Avoid yes-no type replies.
- C. Framing questions that require the pupil to use higher cognitive processes.

- III. Objective: To increase the teacher's use of probing behaviors in order to guide the pupil to more complete and thoughtful responses.

Specific behaviors to be covered:

- A. Prompting
- B. Seeking further clarification and pupil insight - This is a combination of two probing behaviors treated separately in the preliminary field test form of the course. Seeking further clarification and seeking to increase pupil awareness differ largely in terms of the quality of the pupil's initial reply.
- C. Refocusing the pupil's response.

- IV. Objective: To reduce teacher behaviors that interfere with the flow of the discussion.

Specific behaviors to be covered:

- A. Teacher should not repeat her questions.
- B. Teacher should not answer her own questions.
- C. Teacher should not repeat pupil answers.

SUMMARY OF DAILY COURSE SEQUENCE*

For Field Test of Minicourse 1

Day

Minus 2 **

- a. Teachers will be given instructions for preparing pre-instruction lesson (these will be mailed to principal in advance.)
- b. Principal will set up schedule for videotaping pre-instruction lesson and viewing Introduction Tape.

1

- a. Videotape 20 minute pre-instruction lesson in teachers' own classroom.
- b. Give teacher the course Handbook and evaluation forms.
- c. Teachers view Introduction Tape as a group after school and are shown how to operate the equipment.
- d. Assignment: Read preface and first two chapters in Handbook.

2

Instructional Sequence 1

- a. Instructional Tape 1
- b. Model Tape 1 without prompts. Teacher will record behavior after each signal using Model Tape Check List No. 1.
- c. Model Tape 1 with prompts. Teacher will check her recording of behaviors.
- d. Test on Instructional Sequence 1; Handbook Quiz No. 1 on chapters 1 and 2.
- e. Assignment: Plan 10 minute lesson for following day.

3

Microteach 1

- a. Replay Model Tape 1 (with prompts).
- b. Videotape microteaching lesson 1.
- c. First viewing of microteach 1; use Teacher Self-Evaluation Form, Microteach 1, First Viewing.
- d. Second viewing of microteach 1; use Teacher Self-Evaluation Form, Microteach 1, Second Viewing.
- e. Assignment: Replan lesson for following day.

4

Reteach 1

- a. Replay Model Tape 1.
- b. Videotape reteach of lesson 1.
- c. First viewing of reteach 1; use Teacher Self-Evaluation Form, Reteach 1, First Viewing.
- d. Second viewing of reteach 1; use Teacher Self-Evaluation Form, Reteach 1, Second Viewing.
- e. Third viewing of reteach 1 after school with team mate; use Teacher Self-Evaluation Form, Reteach 1, Third Viewing.
- f. Assignment: Read Chapter 3 of Handbook.

* Some activities, such as additional testing and interviews will be scheduled.

** Two days before Day 1.

Day

5

Instructional Sequence 2

- a. Instructional Tape 2.
- b. Model Tape 2 without prompts. Teacher will record behavior after each signal using Model Tape Check List No. 2.
- c. Model Tape 1 with prompts. Teacher will check her recording of behaviors.
- d. Test on Instructional Sequence 2; Handbook Quiz No. 2 on Chapter 3.
- e. Assignment: Plan 10 minute lesson for following day.

6

Microteach 2

- a. Replay Model Tape 2 (with prompts).
- b. Videotape microteaching lesson 2.
- c. First viewing of microteach 1; use Teacher Self-Evaluation Form, Microteach 2, First Viewing.
- d. Second viewing of microteach 2; use Teacher Self-Evaluation Form, Microteach 2, Second Viewing.
- e. Assignment: Replan lesson for following day.

7

Reteach 2

- a. Replay Model Tape 2
- b. Videotape reteach of lesson 2.
- c. First viewing of reteach 2; use Teacher Self-Evaluation Form, Reteach 2, First Viewing.
- d. Second viewing of reteach 2; use Teacher Self-Evaluation Form, Reteach 2, Second Viewing.
- e. Third viewing of reteach 2 after school with team mate; use Teacher Self-Evaluation Form, Reteach 2, Third Viewing.
- f. Assignment: Read Chapter 4 of Handbook.

8

Instructional Sequence 3

- a. Instructional Tape 3.
- b. Model Tape 3 without prompts. Teacher will record behavior after each signal using Model Tape Check List No. 3.
- c. Model Tape 3 with prompts. Teacher will check her recording of behaviors.
- d. Test on Instructional Sequence 3; Handbook Quiz No. 3 on Chapter 4.
- e. Assignment: Plan 10 minute lesson for following day.

9

Microteach 3

- a. Replay Model Tape 3 (with prompts).
- b. Videotape microteaching lesson 2.
- c. First viewing of microteach 3; use Teacher Self-Evaluation Form, Microteach 3, First Viewing.
- d. Second viewing of microteach 3; use Teacher Self-Evaluation Form, Microteach 3, Second Viewing.
- e. Assignment: Replan lesson for following day.

Day

10

Reteach 3

- a. Replay Model Tape 3.
- b. Videotape reteach of lesson 3.
- c. First viewing of reteach 3; use Teacher Self-Evaluation Form, Reteach 3, First Viewing.
- d. Second viewing of reteach 3; use Teacher Self-Evaluation Form, Reteach 3, Second Viewing.
- e. Third viewing of reteach 3 after school with team mate; use Teacher Self-Evaluation Form, Reteach 3, Third Viewing.
- f. Assignment: Read Chapter 5 of Handbook.

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Instructional Sequence 4

- a. Instructional Tape 4
- b. Model Tape 4 without prompts. Teacher will record behavior after each signal using Model Tape Check List No. 4.
- c. Model Tape 4 with prompts. Teacher will check her recording of behaviors.
- d. Test on Instructional Sequence 4; Handbook Quiz No. 4 on Chapter 5.
- e. Assignment: Plan 10 minute lesson for following day.

12

Microteach 4

- a. Replay Model Tape 4 (with prompts).
- b. Videotape microteaching lesson 4.
- c. First viewing of microteach 4; use Teacher Self-Evaluation Form, Microteach 4, First Viewing.
- d. Second viewing of microteach 4; use Teacher Self-Evaluation Form, Microteach 4, Second Viewing.
- e. Assignment: Replan lesson for following day.

13

Reteach 4

- a. Replay Model Tape 4.
- b. Videotape reteach of lesson 4.
- c. First viewing of reteach 4; use Teacher Self-Evaluation Form, Reteach 4, First Viewing.
- d. Second viewing of reteach 4; use Teacher Self-Evaluation Form, Reteach 4, Second Viewing.
- e. Third viewing of reteach 4 after school with team mate; use Teacher Self-Evaluation Form, Reteach 4, Third Viewing.

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- a. Videotape post-instruction lesson in teacher's own classroom.
- b. Collect end-of-course evaluation, written evaluation and group interview.

MODEL TAPE CHECKLIST NO. 1

"INCREASING PUPIL READINESS TO RESPOND"

Name _____ School _____ Date _____

During the model lesson a pair of musical notes (high and low) will sound at varying intervals. The high note will sound just before one of the behaviors described and illustrated in the Model Tape begins and the number of the behavior will be given. The second and lower pitched bell will signify the end of the behavior. Wait until the second note sounds, decide which behavior was illustrated, then circle this behavior after the appropriate number. On the second playing of the model lesson, compare the teacher behaviors you circled with those given by the narrator. Mark only one answer.

TEACHER BEHAVIORS

Behavior No.

1	Pausing,	Incorrect response,	Calling on nonvolunteers
2	Pausing,	Incorrect response,	Calling on nonvolunteers
3	Pausing,	Incorrect response,	Calling on nonvolunteers
4	Pausing,	Incorrect response,	Calling on nonvolunteers
5	Pausing,	Incorrect response,	Calling on nonvolunteers
6	Pausing,	Incorrect response,	Calling on nonvolunteers
7	Pausing,	Incorrect response,	Calling on nonvolunteers

MODEL TAPE CHECKLIST NO. 2

"INCREASING PUPIL PARTICIPATION IN DISCUSSIONS"

Name _____ School _____ Date _____

During the model lesson a pair of musical notes (high and low) will sound at varying intervals. The high note will sound just before one of the behaviors described and illustrated in the Model Tape begins and the number of the behavior will be given. The second and lower pitched bell will signify the end of the behavior. Wait until the second note sounds, decide which behavior was illustrated, then circle this behavior after the appropriate number. On the second playing of the model lesson, compare the teacher behaviors you circled with those given by the narrator. Mark only one answer.

TEACHER BEHAVIORS

Behavior No.

- 1 Redirection questions, Long answer questions,
 Higher cognitive questions
- 2 Redirection questions, Long answer questions,
 Higher cognitive questions
- 3 Redirection questions, Long answer questions,
 Higher cognitive questions
- 4 Redirection questions, Long answer questions
 Higher cognitive questions
- 5 Redirection questions, Long answer questions,
 Higher cognitive questions
- 6 Redirection questions, Long answer questions,
 Higher cognitive questions

TEACHER SELF-EVALUATION FORM
FOR MICROTEACH 2, SECOND VIEWING

Name _____ School _____ Date _____

NOTE: READ ENTIRE FORM EXCEPT INTERPRETATION SECTION BEFORE YOU START REPLAY of
your LESSON.

Purpose: To help evaluate use of REDIRECTION.

VTR Operations: Start tape at beginning and after each instance of REDIRECTION
stop and record.

Time Sampled: Entire tape

Procedures for Recording Observations:

1. Each example of redirection is to be numbered consecutively: 1, 2, 3, etc., on
chart below. The number of pupils involved refers to the number of pupils
engaged in each instance of redirection. The last two columns require a little
explanation. Redirection involves asking the same questions of several pupils.
Rephrasing the question, or asking another question, ends a redirection sequence.
In the instances noted on the tape, we would like you to indicate whether
redirection was ended by rephrasing the question or the use of another question.
If there were no instances of redirection write "none" on the chart.

REDIRECTION

EXAMPLE of REDIRECTION	NUMBER OF PUPILS INVOLVED	REPHRASE QUESTION	ANOTHER QUESTION

Comments/Suggestions: _____

INTERPRETATION:

Redirection is intended to reduce teacher participation. The teacher should note the number of pupils actually involved in a redirection sequence before it ended. The number of pupils involved should increase as the teacher gains more skill. Also of importance is rephrasing of the redirection question. By rephrasing the teacher is increasing the amount of time she takes up in questioning. This should be avoided since it defeats the purpose of redirection.

TEACHER SELF-EVALUATION FORM
FOR RETEACH 2, SECOND VIEWING

Name _____ School _____ Date _____

NOTE: READ ENTIRE FORM EXCEPT INTERPRETATION SECTION BEFORE YOU START REPLAY OF YOUR LESSON.

Purpose: To determine if pupils are giving MORE COMPLEX RESPONSES.

VTR Operations: Start tape at beginning and after each answer stop and record.

Time Sampled: First five minutes.

Procedures for Recording Observations:

1. Each teacher question is to be recorded in sequence--the first question recorded as question 1. The stem types are as follows:
 - (a) A short stem type consists of question beginning who, what, when, and where.
 - (b) A long stem type refers to all other question stems including why, how, explain, interpret, describe, etc.; these may be located in the Handbook.

You are asked to interpret each pupil's response as follows: If the response refers to material that has been previously learned in class or could have been acquired from the textbook, the teacher should tally this as "Previously Learned." If the materials were developed in class, and could not have been recalled directly from previous reading assignments it is to be marked "Developed in Class." Use your best judgement.

QUESTION	SHORT STEM TYPE	LONG STEM TYPE	PREVIOUSLY LEARNED	DEVELOPED IN CLASS

QUESTION	SHORT STEM TYPE	LONG STEM TYPE	PREVIOUSLY LEARNED	DEVELOPED IN CLASS

Comments/Suggestions: _____

INTERPRETATION:

The purpose of this reply is to determine if the teacher is (1) asking questions which have a high probability of evoking a longer response, and (2) developing new concepts in class. A preponderance of check marks in the "Short Stem Type" and "Previously Learned" column would indicate that the teacher is demanding recall on material. She should concentrate on using question items which encourage (1) more complex pupil responses, (2) help develop concepts not previously acquired.